VT7300

Service Manual

PARTS LIST, EXPLODED VIEW, DIAGRAMS

CEC International Inc.

ROOM NO. 504, TOHO ESTATE BUILDING, 12-12, 1-CHOME, SHIBUYA, SHIBUYA-KU, TOKYO 150, JAPAN.
TELEPHONE : (03) 407-8936 / TELEX : CEC INTL J23895

HARKSOUND EUROPE GMBH

MÜHLENKAMP 63, D-2000 HAMBURG 60, W. GERMANY.
TELEPHONE : 040-276363 / TELEX : 2173688 hark d

* DISASSEMBLY INSTRUCTIONS

1. Tools required for disassembly
   Phillips-head screwdriver (M3 and M2.6)
   Slotted-head screwdriver (medium and small sizes)
   Soldering iron
   Hexagon box type screwdriver (M3)
   Hexagon wrench (M4)
   Radio pliers
   Nippers

2. Do the following prior to disassembly:
   (1) Plug off the power supply cord.
   (2) Remove the dust cover.
   (3) Remove the turntable platter and remove the red screws.

3. Remove the bottom base.
   Remove the eleven screws which mount the bottom base. Then the bottom base can be removed from the cabinet(fig.1).

4. Remove the tonearm.
   (1) After removing the botton base, remove the shielded cover (105). Untie the lead-wires of tonearm from shielded PCB (104) with soldering iron.
   (2) Remove the screw which mounts the shield-braided wires (107) and pull out the braided wires from the lead-wires.
   (3) Loosen the two screws which mount the tonearm fixing plate assy.(18) remove the tonearm fixing plate from the axis of the tonearm.
   (4) Return the unit to the original position, and loosen the screw A on rear side tonearm base. The tonearm can be removed from the tonearm base (34) (fig.2).

5. Remove the cueing lever (42).
   (1) Do the same as above "4.Remove the tonearm" step (1) to (3).
   (2) Remove the two screws which mount the cord mounting plate (81).
   (3) Return the unit to the original position, and loosen the screw A on rear side tonearm base. The tonearm can be removed from the tonearm base (fig.2).
   (4) Remove the screw which holds the rest arm (51) and remove the rest arm.
   (5) Remove three screws B which mounts the tonearm base (fig.2).
   (6) Lift the subchassis from the cabinet and pull out the tonearm base from the clearance.
   (7) Remove the two screws which mount the friction plate (39) behind the tonearm base.
   (8) Remove the cueing lever from the tonearm base.

6. Remove the lift bar (47).
   (1) Do the same as above "4. Remove the tonearm" step (1) to (3) as well as "5. Remove the cueing lever" step (2) to (6).
   (2) Pull out the thrust (50) strongly which is in the tip of lift bar behind the tonearm base. Remove the spring (49).
   (3) Draw out the lift bar together with tonearm support (45) upward.
   (4) Remove the lift bar from the tonearm support.

- to be continued -

7. Remove the speed change switch (101)
   (1) Remove the bottom base.
   (2) Untie the three lead-wires (yellow, blue, orange) which connect the speed change switch to the motor-controll PCB and slide type variable resistor with soldering iron.
   (3) Return the unit to the original position and draw out the pitch control knob (60).
   (4) Tear off the control plate badge (59) from the control plate (58).
   (5) Draw out two operating knobs (A): (62) and (63).
   (6) Remove the two screws which mount the speed change switch.

8. Remove the slide type variable resistor (102)
   (1) Remove the bottom base.
   (2) Untie the two lead-wires (blue, brown) which connect the variable resistor to the motor-control PCB and the speed change switch with soldering iron.
   (3) Remove the unit to the original position and draw out the pitch control knob (60).
   (4) Tear off the control plate badge (59) from the control plate (58).
   (5) Remove the two screws which mount the variable resistor.

9. Remove the motor
   (1) After removing the ~~cabinet~~ bottom base, remove the two screws which mount the motor-controlled PCB.
   (2) Untie the two lead-wires (red and black) which connect the power printed circuit board to motor-controlled PCB with soldering iron.
   (3) With soldering iron untie the three lead-wires (yellow, orange, blue) which connect the motor-controlled PCB to microswitch (53) and variable resitor (69).
   (4) Remove the three screws which hold the motor
   (5) Untie the motor grounding wire with soldering iron; the motor can be removed.

* ADJUSTMENT

1. Turntable height and level
   (1) Place the turntable on a stable table and set the turntable platter and the record.
   (2) The height and level can be adjusted with plastic four screws (fig.1).
   Clockwise turning: height becomes higher.
   Counter-clockwise turning: height becomes lower.
   (3) The level of turntable platter against cabinet should be within 1 mm.
   (4) The height of turntable platter should be within 7 - 9 mm as specified in fig. 3.

2. Stylus point height (fig.4)

   (1) During automatic return
   With the power off move the tonearm above the record. Push the reject button and rotate the turntable platter by hand. Stop the rotation of platter during tonearm return and measure the height between stylus point and record surface.

   If the height is less than 5 mm, turn the screw A clockwise; if the height is more than 8 mm, turn the screw A counter-clockwise.

   (2) During manual operation
   Set the cueing knob to UP and move the tonearm above the record. Measure the gap between stylus point and record surface. If the gap is not within 5 - 8 mm, adjust as described above (1).

- to be continued -

3. Automatic return adjustment

(1) Make sure the tonearm fixing plate is properly installed as shown in fig.5.
(2) Put on a record and let the stylus drop slightly outside the end groove or 65 - 75R from the center of the turntable. When the record ends, make sure the tonearm automatically returns from any of the following positions:

(a) For LP records, a click is heard when the stylus is between 53 and 57.5 R and then the tonearm automatically returns.
(b) For EP records, a click is heard when the stylus is between 48.5 and 53 R and then the tonearm automatically returns.
(c) For the automatic return test record (CEC RG-652), a click is heard when the stylus is between 55 and 61 R and then the tonearm automatically returns.

(3) If the tonearm does not automatically return from all of the above positions, turn the screw in fig.5 to adjust:

Clockwise turning of the screw moves the return position close to the center, and counter-clockwise turning brings the return position away from the center of the turntable.

4. Adjustment of automatic shut off.

(1) Make sure the gap between tonearm fixing plate and microswitch (100) is 0,8 mm - 1 mm as shown in fig.5 when the tonearm is on the tonearm rest.
(2) If the gap is not within the specified one, loosen the two screws A which mount the microswitch to switch base (17) and adjust the gap by moving the microswitch.
(3) After adjustment, tighten the two screws A.

5. Positioning of ratchet A and turntable gear (fig.6)

(1) Make sure the correct position of ratchet A and turntable gear with the fig.6 as a guide.
(2) If the gap between ratchet A and turntable gear is not within 0.4 - 0.6mm, adjust by turning the drive gear pin (6).

6. Speed adjustment

The provides the pitch adjustment plus-minus 2,8% against normal speed. If the speed adjustment cannot be made within this specification or the speed fluctuation between 33 and 45 rpm is too big, make the following adjustment.

(1) Set the pitch control knob (60) to the center of the slide type variable resistor.
(2) Remove the speed adjusting label on the bottom base.
(3) Turn the semi-fixed variable resistors through the two holes Clockwise turning makes the speed up, and counter-clockwise turning makes the speed down.

* PARTS REPLACEMENT

1. Tonearm
Remove the tonearm referring to DISASSEMBLY INSTRUCTIONS 4, and replace. To reassemble use DISASSEMBLY INSTRUCTIONS in reverse. After replacement, adjust the tonearm referring to ADJUSTMENTS 2. 3. 4.

2. Cueing lever
Remove the cueing lever referring to DISASSEMBLY INSTRUCTIONS 5 and replace.

- to be continued -

To reassemble use DISASSEMBLY INSTRUCTIONS in reverse. After replacement, check the points according to ADJUSTMENTS 2. 3. 4.

3. Lift bar
Remove the lift bar referring to DISASSEMBLY INSTRUCTIONS 6 and replace after adhering 10^5 CS silicon oil (fig.7). To reassemble use DISASSEMBLY INSTURCTIONS in reverse. For adjustment, refer to ADJUSTMENT 2.3.4.

4. Speed change switch
Remove the speed change switch referring to DISASSEMBLY INSTRUCTIONS 7 and replace. To reassemble use DISASSEMBLY INSTRUCTIONS in reverse.

5. Slide type variable resistor
Remove the slide type variable resistor referring to DISASSEMBLY INSTRUCTIONS 8, and replace. To reassemble use DISASSEMBLY INSTRUCTIONS in reverse.

6. Motor
Remove the motor referring to DISASSEMBLY INSTRUCTIONS 9 and replace. To reassemble use DISASSEMBLY INSTRUCTIONS in reverse. During reassembly never fail to bind the lead-wires to the wire-wrap terminal and solder them securely.

7. Turntable shaft
Remove turntable shaft after removing the three screws which mount the turntable shaft, and replace. After replacement check the gap between ratchet B and turntable gear as instructed in ADJUSTMENT 5, and make sure the automatic return operation.

* TROUBLESHOOTING

1. The tonearm will not automatically return.

Remove the turntable platter and check to see the positioning of ratchet A and turntable gear referring to ADJUSTMENT 5.

- No: Adjust the gap between ratchet A and turntable gear by turning the drive gear pin (fig.6).
- Yes: Turn the screw counter-clockwise (fig.5).

Make sure ADJUSTMENT 3. (1) and readjust according to (2) and (3).

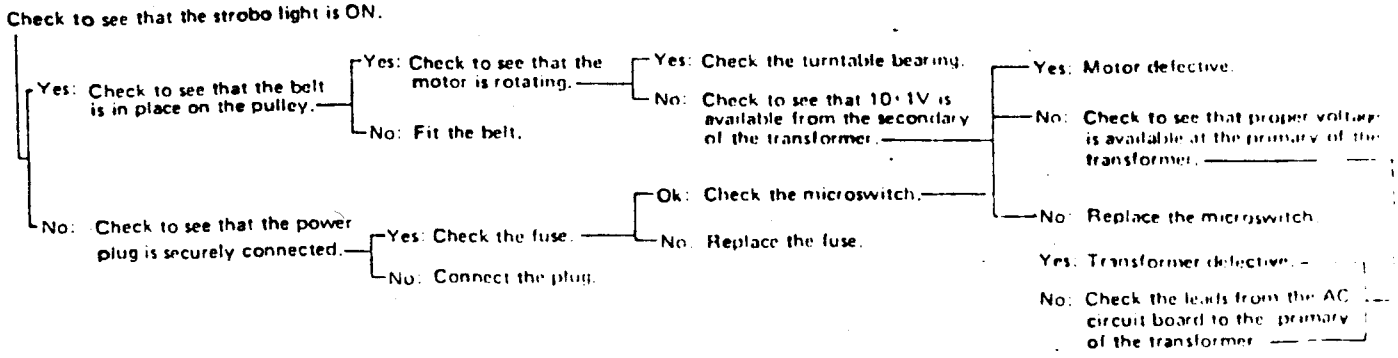
2. The tonearm returns some seconds after the end of the performance.

Turn the screw counter-clockwise (fig.5).

3. The tonearm returns before the end of the performance.

Turn the screw clockwise (fig.5).

4. The turntable platter will not rotate even though the tonearm is above the record.


Check to see that the strobo light is ON.
Yes: Check to see that the belt is in place on the pulley.
Yes: Check to see that the motor is rotating.
Yes: Check the turntable bearing.
Yes: Motor defective.
No: Check to see that 10±1V is available from the secondary of the transformer.
No: Check to see that proper voltage is available at the primary of the transformer.
Yes: Transformer defective.
No: Check the leads from the AC circuit board to the primary of the transformer.
No: Fit the belt.
No: Check to see that the power plug is securely connected.
Yes: Check the fuse.
Ok: Check the microswitch.
No: Replace the microswitch.
No: Replace the fuse.
No: Connect the plug.

5. The turntable platter will not stop rotating.

Check to see if the turntable will stop rotating when knob of microswitch is sufficiently pushed

- Yes: Adjust the clearance between the knob of microswitch and tip of tone arm fixing plate to 1 mm. (Fig. 5) as-1
- No: Check the wiring.
  - No: Replace wiring according to the circuit diagram.
  - Yes: Check the microswitch.
    - No: Microswitch defective.
    - Yes: Capacitor defective.

6. Adjustment of turntable speed cannot be made.

* Strobo indexes appear not to stand still.

  Readjust semi-fixed variable resistors referring to ADJUSTMENT 6.

* No speed adjustments with variable resistor

  Check the wirings including the motor servo controller circuit.
  - No: Replace wiring according to the wiring diagrams.
  - Yes: Check the variable resistor.
    - No: Variable resistor defective.
    - Yes: Check the speed change switch.
      - No: Speed change switch defective.
      - Yes: Motor defective.

7. No sound from the speaker

Check to see that the output cords are securely connected to the amplifier or receiver.
- No: Connect the cords.
- Yes: Check to see that connections are made to the PHONO input terminals of the amplifier or receiver.
  - No: Connect to PHONO.
  - Yes: Check to see that the select switch of the amplifier is placed to PHONO.
    - No: Place select switch to PHONO.
    - Yes: Remove the headshell, touch the right and left end tips of the tonearm connector with a tip-sharpened metalic rod such as screwdriver and listen for the speaker to produce a humming noise (fig.8).
      - No: Perform continuity test between the tonearm and output cords.
      - Yes: Check the connections between the cartridge and headshell.
        - No: Make correct connections.
        - Yes: Cartridge defective.

8. The turntable is rotating but the strobo light will not light.

Check the resistor (Model E-0, E-2 = 39 Kohm, Model E-M, E-3-3 = 12 Kohm) which is connected with neon lamp in series.
- Yes: Neon lamp is defective.
- No: Replace the resistor.

VT-7300

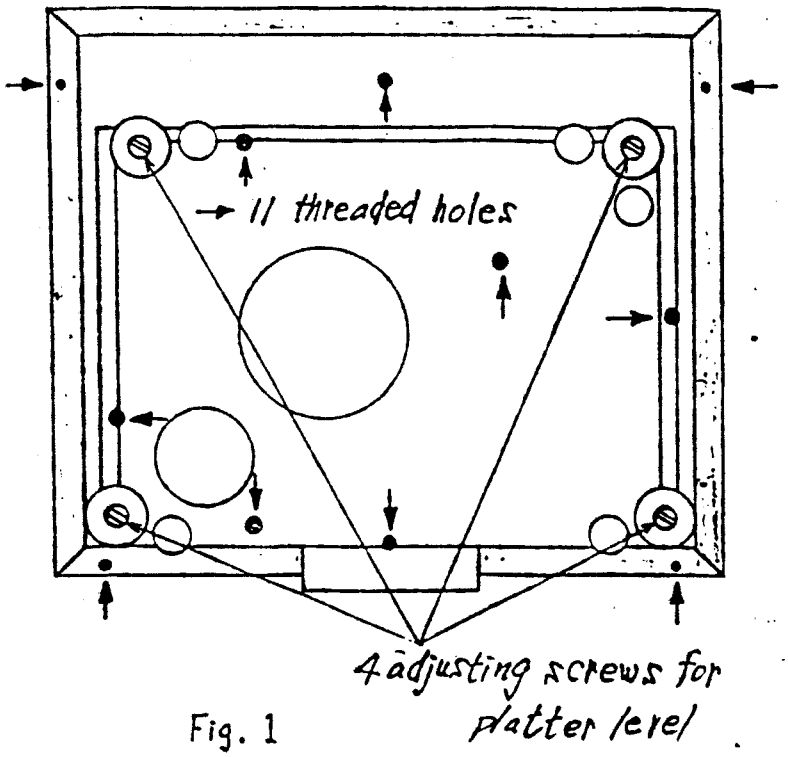


Fig. 1

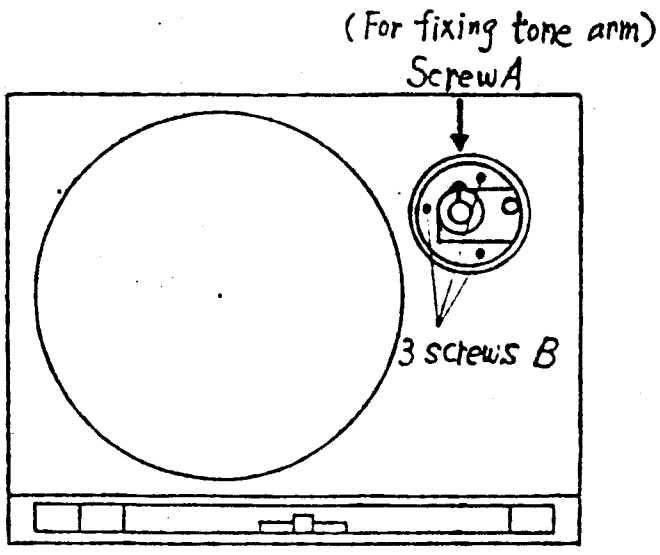


Fig. 2

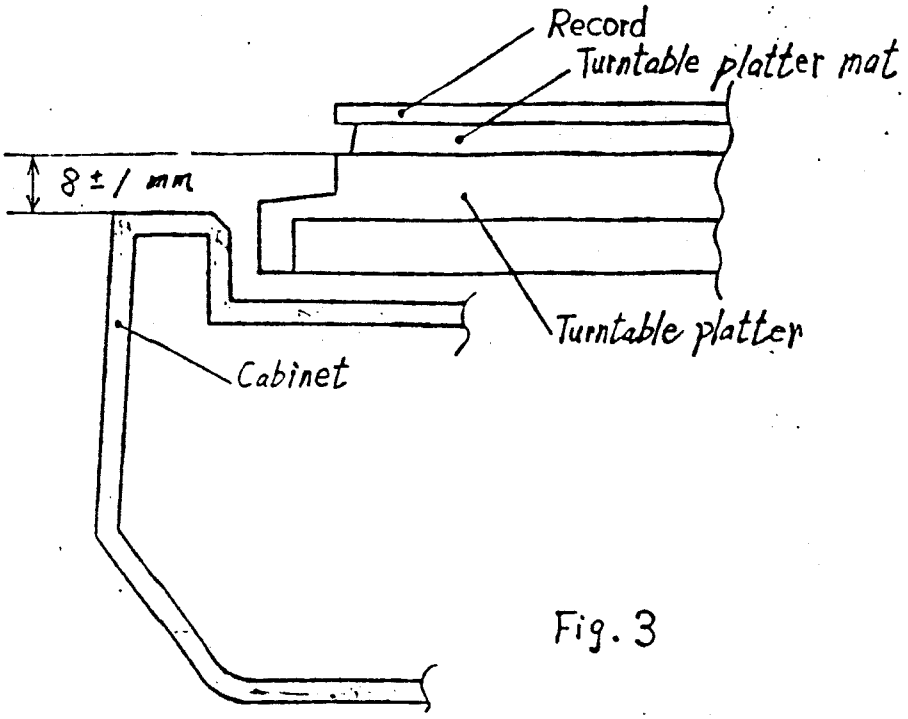

Record
Turntable platter mat
8 ± 1 mm
Turntable platter
Cabinet

Fig. 3

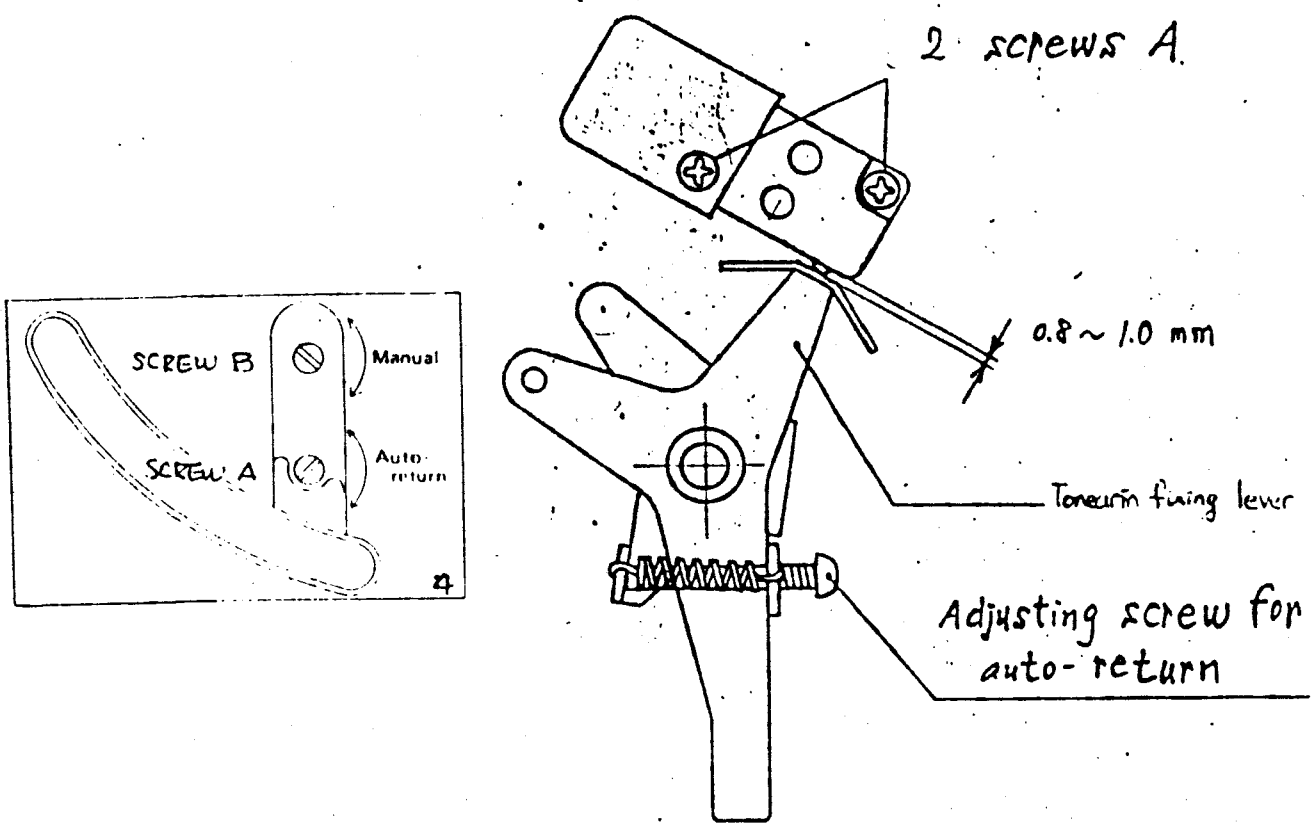

2 screws A
SCREW B
Manual
SCREW A
Auto return
0.8 ~ 1.0 mm
Tonearm fixing lever
Adjusting screw for auto-return

Fig. 5

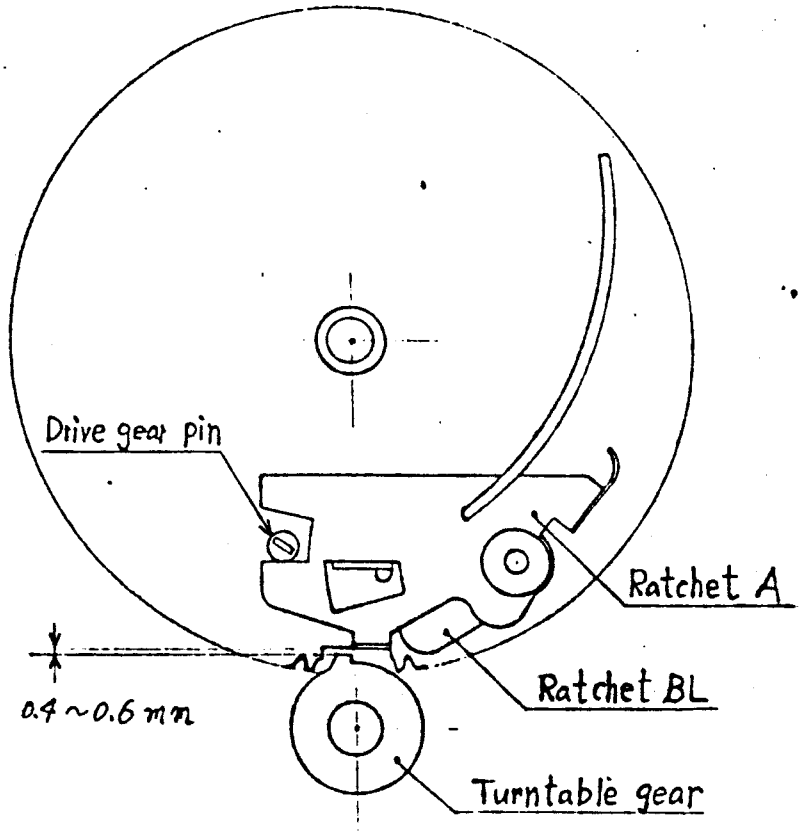


Fig. 6

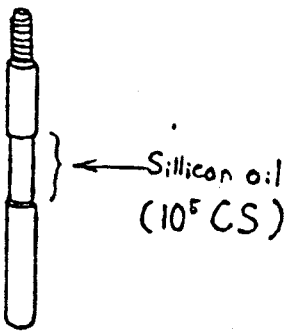


Fig. 7

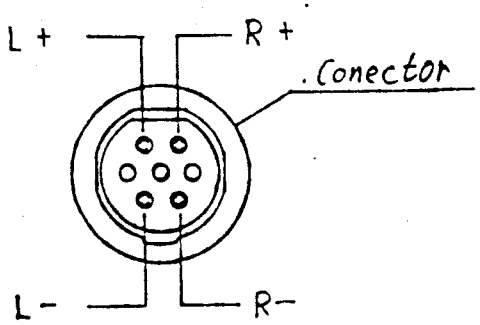


Fig. 8

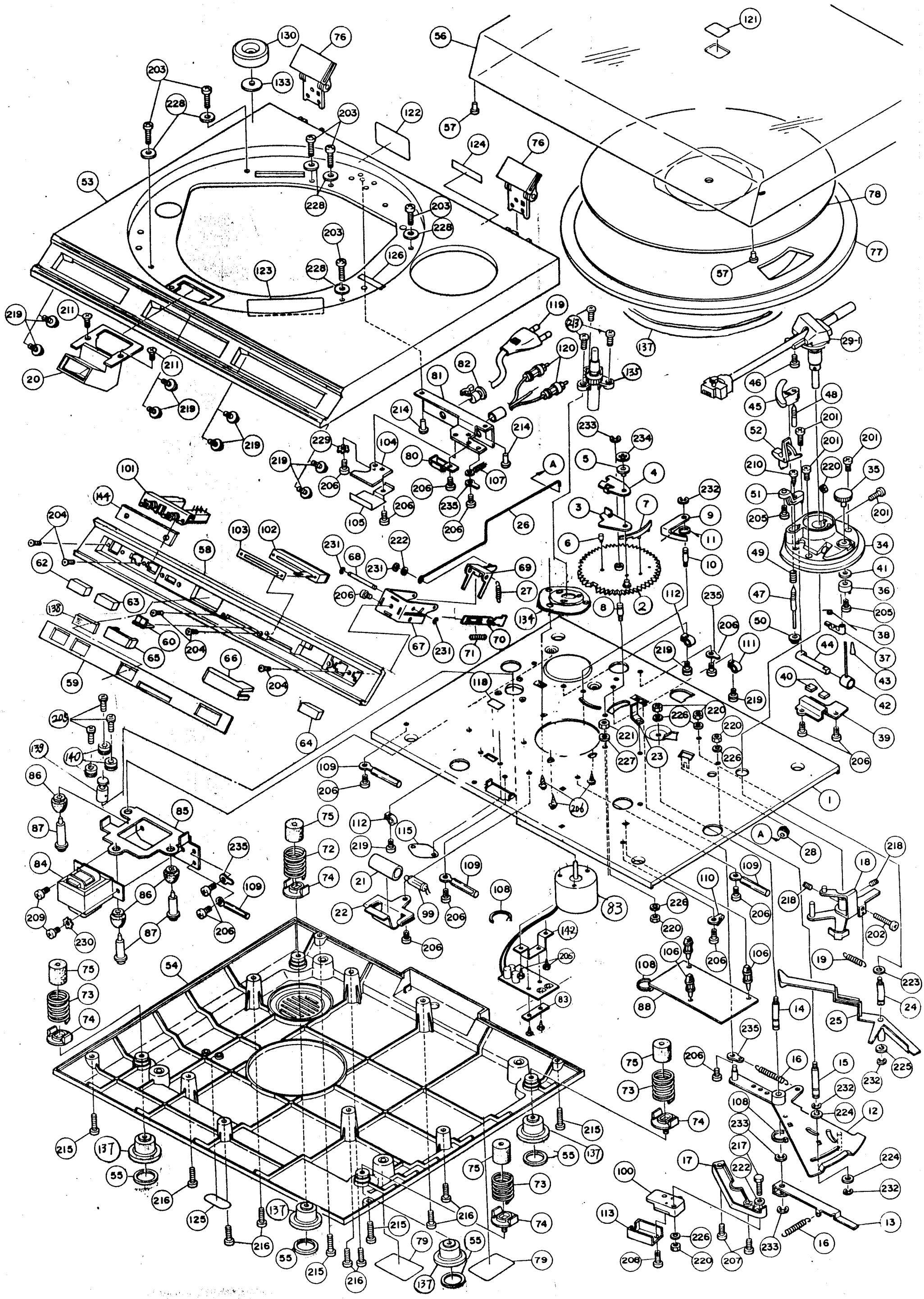
Ref.No.	Parts No.	Q'ty	Description	Unit price (¥)
1	CA 20646-4	1	Subchassis	
2	CD 20664	1	Drive gear	
3	CD 44709	1	Ratchet BL	
4	CA 44708	1	Ratchet A	
5	CB 41801	1	Ratchet collar	
6	CD 45709	1	Drive gear pin	
7	CD 46080	1	Guide plate	
8	CB 46848	1	Drive gear shaft	
9	CD 45629	1	Gear stopper	
10	CB 45594	1	Gear stopper shaft B	
11	CE 45843-2	1	Spring	
12	C 30870s	1	Return plate assembly	
13	CA 45844	1	Guide plate	
14	CB 45549	1	Return plate shaft	
15	CB 45550	1	Spacer shaft	
16	CE 41827	2	Return plate sprin g	
17	CD 46064	1	Switch base	
18	C 45649s	1	Tonearm fixing plate assembly	
19	CE 43917	1	Pushing spring	
20	C 45655s	1	Neon hood assembly	
21	CD 44866	1	Sleeve	
22	CA 45642	1	Sleeve mounting plate	
23	CA 46175	1	Return arm stopper	
24	CB 46861	1	Return arm shaft	
25	CD 30747	1	Return arm	
26	CE 45923	1	Reject spring	
27	CE 46084	1	Reject lever spring	
28	CD 43972	1	Reject spring spacer	
29	CF 30764	1	Tonearm assembly	
29-1			Tonearm	
29-2			Headshell	
29-3			Counterweight	
29-4			Subweight	
30		1	Cartridge MC-17	
31		2	Cartridge mounting screw	
32	CD 43214	2	Cartridge mounting washer	
33	CB 43213	2	Cartridge mounting nut (M2.6)	
34	CD 20654	1	Tonearm base	
35	CD 45523-2	1	Antiskating knob	

36	CD 45784	1	Antiskating cam
37	CD 45341	1	Antiskating lever
38	CE 45422-1	1	Antiskating spring
39	CA 45522	1	Friction plate
40	CK 44942	2	Friction pad
41	CK 46073	1	Felt washer
42	C 30738s	1	Cueing lever assembly
43	CD 45775	1	Cueing lever knob
44	CD 45348	1	Cueing cam
45	CD 45342	1	Tonearm support
46	CD 41936	1	Left cap
47	CB 45424	1	Left bar
48	CB 45425	1	Adjusting screw
49	CE 45963	1	Spring
50	CD 45358	1	Thrust
51	CD 45343	1	Rest arm
52	C 46007s	1	Tonearm rest assembly
53	CD 10026-1	1	Cabinet
54	CD 10027-2	1	Bottom base
55	CK 45601	4	Felt leg
56	CD 20641-1	1	Dust cover
57	CD 44205	2	Dust cover cushion
58	CD 20651	1	Control plate
59	CK 45679	1	Control plate badge
60	CD 45553	1	Pitch control knob
61	XXX	XX	XXX
62	CD 45542	2	Push button
63	XXX	XX	XXX
64	CD 45541	1	Reject button
65	CD 30748	1	Frame C
66	CD 30749-1	1	Frame D
67	CA 30734-3	1	Switch mounting plate
68	CB 45527	1	Guide shaft B
69	C 45658s	1	Reject lever assembly
70	C 45653s	1	Button lever assembly
71	CE 45927	1	Spring
72	CE 45587	2	Float spring A
73	CE 45849	2	Float spring B
74	CD 44937	4	Spring mounting
75	CD 42438	4	Moltprene
76	CK 30772	2	Hinge

77	CD 20631	1	Turntable platter
78	CD 20619	1	Turntable platter mat
79	CH 46158	2	Blind seal
80	CA 44996	1	Shielded cord clamping
81	CA 45582	1	Cord mounting plate
82	CD 44421	1	Strain releaf (4K-4)
83	CF 20726	1	Motor assembly
84	CF 30690-1	1	Power transformer
85	CA 45580	1	Transformer mounting plate
86	CD 44289-1	3	Motor cushion rubber
87	CR 45586	3	Special screw
88	C 30686-1	1	PCB assembly
89	CF 36164	1	Power PCB
90	CF 47533	1	Condenser
91		1	Oxidized metalic resistor (39 Kohm 2w)
92	CF 44795	1	Silicon bridge diode
93		1	Electrolytic condenser (16V 1000μF)
94	XXX	XX	XXX
95	XXX	XX	XXX
96	XXX	XX	XXX
97	CF 43532	1	Fuse (100 mA)
98	CF 44674	1	Fuse (400 mA)
99	CF 43965-6	1	Neon lamp
100	CF 43233	1	Microswitch
101	CF 45863	1	Speed change switch
102	CF 45864	1	Slide type variable resistor (5KΩB)
103	CK 45833	1	Masking sheet A
104	CF 45603	1	Shield PCB
105	CA 45583	1	Shield cover A
106	CF 30490	3	PCB fixing spacer
107	CF 44074-2	1	Braided wire
108	CD 45269	2	Cable tie
109		4	Metalic clamping
110	CF 46081	2	Mini-clamping
111	CD 43307	1	Nylon clamping (3N)
112	CD 44655	1	Cord stopper (5N)
113	CD 41833	1	Switch cover
114	XXX	XX	XXX
115	CH 44336	1	Blind
116	XXX	XX	XXX
117	XXX	XX	XXX

118	XXX	XX	XXX
119	CF 31329	1	AC power supply cord
120	CF 31324-1	1	Out put shielded cord
121	CK 45964	1	Dust cover logo
122	CH 45893	1	Rating label
123	CH 45892-1	1	Clamp caution label
124	CH 44312	3	Serial number label
125	CH 44399-1	1	Variable resistor label
126	XXX	XX	XXX
127	XXX	XX	XXX
128	CD 30417	1	Parts box
129	CH 44216	1	Parts box cover
130	CD 43100	1	45 rpm adapter
131	CK 41930	1	Oil tube
132	CD 44217	1	Screwdriver
133	C 45012	1	Adapter mounting assembly
134	CA 46074	1	Turntable shaft mounting plate
135	C 45847s	1	Turntable shaft assembly
136	CD 45931	4	Rubber leg
137	CD 44128	1	Rubber belt
138	CD 45547-1	1	Screen
139	CB 43960	1	Pulley
140	CD 43786	3	Motor cushion rubber
141	CB 45423	3	Spacer
142	CA 43989	1	PCB mounting metal
143	CF 44045	1	Insulation bard
144	CA 45795	1	Switch mounting plate
	CH 43548	1	Fuse label
	CH 44666	1	Fuse label 400mA
	CD 46256	1	Return arm support
	CH 45609	1	Carton box
	CD 20665	1	Styrol packing (R)
	CD 20667	1	Styrol packing (L)
	CH 45608	1	Polyethylen bag for unit
	CH 40112	2	Polyethylen bag for turntable platter
	CH 45972	1	Polyethylen bag for owner's manual
	CH 44221	1	Polyethylen bag for dust cover
	CD 45321	2	Carll stopper
	CD 45051	4	Rubber ring
		1	Owner's manual

EXPLODED VIEW VT-T300


121
130
76
56
203
133
228
203
122
57
124
76
53
78
203
228
203
77
126
123
228
57
219
211
119
213
137
29-1
120
82
135
81
46
20
211
48
45
214
214
233
234
219
229
104
80
107
A
5
4
101
206
206
206
235
206
26
3
7
232
9
144
204
105
206
6
11
103
102
222
231
68
69
10
62
58
231
27
112
235
63
206
8
2
134
138
60
204
65
66
111
50
38
44
37
59
204
219
206
219
43
118
40
42
205
226
220
39
221
220
227
23
226
206
64
109
206
1
139
140
86
85
75
112
115
A
28
218
87
72
219
109
18
84
74
21
108
110
109
218
86
99
206
83
209
206
206
202
230
87
22
206
142
106
206
106
19
75
108
223
73
205
88
14
24
74
83
235
25
54
75
206
16
15
225
73
232
108
224
12
74
233
215
217
215
137
222
17
224
55
137
100
232
75
73
113
226
13
216
74
233
16
125
137
215
79
55
220
207
216
55
215
216
137
79
208
216
215
137
55
75
73
74
55
137
216
215
79
55
137
216
215
137
55
75
73
74
55
137
216
215
79
55
137
216
215
137
55
75
73
74
55
137
216
215
79
55
137